

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A power supply apparatus comprising:

a radio frequency signal ~~oscillating means oscillator~~ for oscillating a radio frequency signal;

a modulator ~~modulation means~~ for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal ~~oscillating means oscillator~~, and for outputting a pulse signal;

an amplifier ~~amplifying means~~ for amplifying a selected one of the radio frequency signal oscillated by said radio frequency signal ~~oscillating means or oscillator~~ and the pulse signal output from said ~~modulation means modulator~~; and

a transmitting device ~~transmission means~~ for transmitting the selected one of the radio frequency signal ~~or and the~~ pulse signal amplified by said ~~amplifying means amplifier to an~~ external device, wherein

said radio frequency signal is selected for amplification by the amplifier when the transmitted signal is to provide a power supply to the external device, and said pulse signal is selected for amplification by the amplifier when the transmitted signal is to provide data to the external device, and

said ~~amplifying means amplifier~~ amplifies the selected one of the radio frequency signal or and the pulse signal in a manner that peak power of the radio frequency signal becomes greater than peak power of the pulse signal.

2. (Currently Amended) The power supply apparatus according to claim 1, wherein the radio frequency signal oscillated from said radio frequency signal ~~oscillating means oscillator~~ is an unmodulated continuous wave.

3. (Currently Amended) A power supply apparatus comprising:

a radio frequency signal ~~oscillating means oscillator~~ for oscillating a radio frequency signal;

~~a modulator~~ ~~modulation means~~ for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal ~~oscillating means~~ oscillator, and for outputting a pulse signal;

~~an amplifier~~ ~~amplifying means~~ for amplifying the pulse signal output from said ~~modulation means~~ modulator; and

~~a transmitting device~~ ~~transmission means~~ for transmitting the pulse signal amplified by said ~~amplifying means~~ amplifier to an external device, wherein

when said ~~transmission means~~ transmitting device transmits a pulse signal for providing a power supply to the external device, said ~~modulation means~~ modulator increases a duty ratio of the pulse signal, and said ~~amplifying means~~ amplifier increases an amplification factor of the pulse signal to increase the peak power of the pulse signal, as compared with a case of transmitting a pulse signal ~~corresponding to~~ for providing transmission data to the external device.

4. (Currently Amended) The power supply apparatus according to claim 3, wherein said ~~modulation means~~ modulator carries out pulse modulation of the radio frequency signal, and outputs the pulse signal for the power supply and the pulse signal corresponding to the transmission data alternately in time.

5. (Currently Amended) The power supply apparatus according to claim 4, wherein said ~~modulation means~~ modulator outputs the pulse signal for the power supply at every predetermined time intervals after the pulse signal for the power supply is transmitted.

6. (Currently Amended) The power supply apparatus according to claim 3, wherein said ~~modulation means~~ modulator modulates, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal using a digital modulation method of generating a modulation signal whose envelope varies.

7. (Currently Amended) A power supply apparatus comprising:

a radio frequency signal ~~oscillating means~~ oscillator for oscillating a radio frequency signal;

a modulator ~~modulation means~~ for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal ~~oscillating means~~ oscillator, and for outputting a pulse signal;

a first ~~amplifying means~~ amplifier for amplifying the pulse signal output from said ~~modulation means~~ modulator;

a second ~~amplifying means~~ amplifier for amplifying the pulse signal amplified by said first ~~amplifying means~~ amplifier; and

a transmitting device ~~transmission means~~ for selectively transmitting one of the pulse signal amplified by said first ~~amplifying means~~ or amplifier and the pulse signal amplified by said second ~~amplifying means~~ amplifier to an external device, wherein

said ~~modulation means~~ modulator makes a duty ratio of the pulse signal greater when said ~~transmission means~~ transmitting device transmits the pulse signal amplified by said second ~~amplifying means~~ amplifier to the external device than when said ~~transmission means~~ device transmits the pulse signal amplified by said first ~~amplifying means~~ amplifier to the external device.

8. (Currently Amended) The power supply apparatus according to claim 7, wherein said ~~modulation means~~ modulator carries out pulse modulation of the radio frequency signal, and outputs a pulse signal for power supply and a pulse signal corresponding to transmission data alternately in time.

9. (Currently Amended) The power supply apparatus according to claim 8, wherein said ~~modulation means~~ modulator outputs the pulse signal for the power supply at every predetermined time interval after the pulse signal for the power supply is transmitted.

10. (Currently Amended) The power supply apparatus according to claim 7, wherein said ~~modulation means~~ modulator modulates, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal using a digital modulation method of generating a modulation signal whose envelope varies.

11. (Currently Amended) A power supply apparatus comprising:

a radio frequency signal ~~oscillating means~~ oscillator for oscillating a radio frequency signal;

a modulator ~~modulation means~~ for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal ~~oscillating means~~ oscillator, and for outputting a pulse signal;

a first ~~amplifying means~~ amplifier for amplifying the pulse signal output from said ~~modulation means~~ modulator;

a second ~~amplifying means~~ amplifier for amplifying the pulse signal amplified by said ~~first amplifying means~~ amplifier;

a transmitting and receiving ~~means~~ device for selectively transmitting one of the pulse signal amplified by said first ~~amplifying means or~~ amplifier and the pulse signal amplified by said second ~~amplifying means~~ amplifier to external noncontact wireless communication equipment, and for receiving a pulse signal transmitted from said external noncontact wireless communication equipment; and

a demodulator ~~demodulation means~~ for demodulating the pulse signal received by said transmitting and receiving ~~means~~ device, wherein

said ~~modulation means~~ modulator makes, when said transmitting and receiving ~~means~~ device transmits the pulse signal amplified by said second ~~amplifying means~~ amplifier, a duty ratio of the pulse signal greater than when said transmitting and receiving ~~means~~ device transmits the pulse signal amplified by said first ~~amplifying means~~ amplifier.

12. (Currently Amended) The power supply apparatus according to claim 11, wherein said transmitting and receiving ~~means~~ device comprises:

an antenna for transmitting and receiving the pulse signal; and
a circulator for supplying said antenna with the pulse signal amplified by said first or second ~~amplifying means~~ amplifier, and for supplying said ~~demodulation means~~ demodulator with the pulse signal received by said antenna, and wherein

said power supply apparatus comprises:

a switch that is brought to an OFF state when said circulator supplies said antenna with the pulse signal amplified by said first or second ~~amplifying means~~ amplifier, and that is brought to an ON state when said circulator supplies said ~~demodulation means~~ demodulator with the pulse signal received by said antenna, said switch being interposed between said circulator and said ~~demodulation means~~ demodulator.

13. (Currently Amended) A power supply method comprising the steps of:

carrying out pulse modulation of a radio frequency signal to produce a pulse signal;
selecting one of said radio frequency signal and the pulse signal, such that:
the radio frequency signal is selected when a power supply is to be provided by
transmission to an external device, and
the pulse signal is selected when a data signal is to be provided by transmission to
the external device;

amplifying the selected one of the pulse signal passing through the pulse modulation or
and the radio frequency signal to produce an amplified signal; and

transmitting the amplified radio frequency signal or pulse signal to the external device,
wherein

the radio frequency signal or pulse signal is amplified amplifying step is performed in a
manner that peak power of the amplified signal is greater when the radio frequency signal is the
selected signal becomes greater than peak power of when the pulse signal is the selected signal.

14. (Original) The power supply method according to claim 13, wherein the radio frequency signal is an unmodulated continuous wave.

15. (Currently Amended) A power supply method comprising the steps of:

carrying out pulse modulation of a radio frequency signal;
amplifying the pulse signal ~~passing through~~ produced as a result of the pulse modulation;

and

transmitting the amplified pulse signal to an external device, wherein
the power supply method makes, when transmitting the pulse signal ~~for the~~ to provide a
power supply to the external device, a duty ratio of the pulse signal greater and an amplification
factor of the pulse signal higher to increase the peak power of the pulse signal than when
transmitting the pulse signal to provide ~~corresponding to the~~ transmission data to the external
device.

16. (Currently Amended) The power supply method according to claim 15 ~~characterized by~~
~~carrying out wherein~~ the pulse modulation of the radio frequency signal ~~is carried out so as to~~
output the pulse signal for providing the power supply and the pulse signal ~~corresponding to~~ for
providing the transmission data alternately in time.

17. (Currently Amended) The power supply method according to claim 16 ~~characterized by~~
~~outputting wherein~~ the pulse modulation ~~is carried out so as to output~~ the pulse signal for
providing the power supply at ~~every~~ predetermined time intervals after the pulse signal for
providing the power supply is transmitted.

18. (Currently Amended) The power supply method according to claim 15 ~~characterized by~~
further comprising modulating, instead of carrying out the pulse modulation of the radio
frequency signal, the radio frequency signal by using a digital modulation method that generates
a modulation signal whose envelope varies.

19. (Currently Amended) A power supply method comprising:

~~a modulation step of~~ carrying out pulse modulation of a radio frequency signal, ~~and of~~
~~outputting in order to produce a~~ pulse signal;

utilizing a first amplifying step of amplifying amplifier to amplify the pulse signal output in-produced by the pulse modulation; step; and

utilizing a second amplifying step of amplifying amplifier to amplify the pulse signal amplified in-by the first amplifying step, amplifier; and

selectively transmitting one of wherein the power supply method transmits the pulse signal amplified in-by the first amplifying step or amplifier and the pulse signal amplified in-by the second amplifying step amplifier to an external apparatus, and makes wherein
_____ a duty ratio of the pulse signal is made greater when transmitting the pulse signal amplified in-by the second amplifying step amplifier is transmitted to the external apparatus than when transmitting the pulse signal amplified in-by the first amplifying step amplifier is transmitted to the external apparatus.

20. (Currently Amended) The power supply method according to claim 19 ~~characterized by~~
~~carrying out wherein~~ the pulse modulation of the radio frequency signal ~~is carried out so as to~~
output the pulse signal for providing the power supply and the pulse signal ~~corresponding to for~~
providing the transmission data alternately in time.

21. (Currently Amended) The power supply method according to claim 20 ~~characterized by~~
~~outputting wherein the pulse modulation is carried out so as to output~~ the pulse signal for
providing the power supply at ~~every~~ predetermined time intervals after the pulse signal for
providing the power supply is transmitted.

22. (Currently Amended) The power supply method according to claim 19 ~~characterized by~~
further comprising modulating, instead of carrying out the pulse modulation of the radio
frequency signal, the radio frequency signal by using a digital modulation method that generates
a modulation signal whose envelope varies.

23. (Currently Amended) A power supply method comprising:

~~a modulation step of carrying out pulse modulation of a radio frequency signal, and of outputting in order to produce a pulse signal;~~

~~utilizing a first amplifying step of amplifying amplifier to amplify the pulse signal output in-produced by the pulse modulation; step; and~~

~~utilizing a second amplifying step of amplifying amplifier to amplify the pulse signal amplified in-by the first amplifying step, amplifier;~~

~~selectively transmitting one of wherein the power supply method transmits the pulse signal amplified in-by the first amplifying step or amplifier and the pulse signal amplified in-by the second amplifying step amplifier to external noncontact wireless communication equipment; , demodulates~~

~~demodulating, when receiving a pulse signal transmitted from said external noncontact wireless communication equipment, the received pulse signal, and makes, wherein~~

~~when transmitting the pulse signal amplified in-by the second amplifying step is transmitted to the external noncontact wireless communication equipment, a duty ratio of the transmitted pulse signal is made greater than when transmitting the pulse signal amplified in-by the first amplifying step amplifier is transmitted to the external noncontact wireless communication equipment.~~